

## Notes regarding unmanned aerial systems (UAS) from previous Board meetings

From February, 2017

- Jesse Gibbons, Coutts Brothers, was present for the UAV discussion. Coutts Brothers provides high-voltage asset inspections, and Gibbons told the Board the company has recently branched into mapping and surveying with drones. He explained that they create a photometric three-dimensional map using GIS and then program the drone's path. Once programmed, the DJI Agras MG-1 Agricultural Drone they are using sprays unpiloted while maintaining a height of one meter above crops and also has the ability to adjust droplet size. Gibbons added that one drawback currently is that the battery needs to be recharged every 45 minutes.
- Stevenson inquired about getting points at the tips of tree branches where browntail moth is located. Gibbons responded that they would first pilot the drone to create a three dimensional map of points and then use the points from the map to program the drones with exact flight patterns for applications. This allows the pesticide to be applied very precisely.
- Jemison asked Gibbons if he considered UAV applications to be aerial applications. Gibbons answered that Coutts Brothers treats them as aerial applications and they hire pilots to fly their drones. The FAA requires and issues Remote Pilot Certificates to commercial UAV operators.

From March, 2017

- Patterson explained that the Board was given a copy of the rules that pertain. Only commercial applicators can do aerial applications, not private. As Coutts stated at the board meeting they attended, they can oversee applications from a bucket truck. There is nothing in our rules to require that. If you're in the airplane, you can see what's happening. There is nothing in our rules that says they have to have a means to see where spray is going to prevent drift.
- Bohlen stated that the rules on aerial application clearly do not envision applications in small areas, which UAVs could be. Also, would need to change the notification requirements; maybe not be as rigid about distances to notify. They make sense on 75 acres, not on 2 acres.
- Flewelling said that it would be easier to classify UAVs as a separate application method. Define and write specific rules. Not really ground, not really aerial.
- Morrill agreed that the rules are blurred, except for Chapter 51. We tend to think of UAVs as small, but they could get bigger. If you're spraying ounces over an oak tree at 8 inches, that's different than spraying gallons over a larger area. Not just acreage but also the size of the equipment. He asked where things stand now as far as being able to spray. Patterson replied that a UAV operator has to be permitted by FAA. Other permits are required for applying pesticides, flying over heavily populated areas, and carrying hazardous chemicals. If they get those permits, there is nothing in Maine's rules to prevent them from doing an application.
- Morrill suggested talking to applicators to determine what should be done. Hicks noted that most labels specify 10 feet over crops for aerial applications; it might be worth looking at them as EPA is slow to add anything to labels.

May, 2017

Daniel Jockett, FAA Aviation Safety Inspector

From February, 2018

- Morrill stated the Board has discussed UAS in the past and had an FAA employee attend a previous Board meeting to explain the federal regulations. He added that if they are going to enter into rulemaking, it would be better to do a few at a time.
- Lay told the Board that he has been researching UAS, and there are some states that are beginning to move forward with a category for them, including North Carolina and Washington. He added that he would like to do further research on what some of the other states are doing. He has received a couple inquiries from individuals who want to start businesses using UAS to make pesticide applications, especially for brown tail moth applications.
- Bohlen stated that there have been a number of conversations in the past about the drones, and asked if there is enough interest that the Board needs to put some rules in place for this summer. Bohlen added that the Board decided to use the current aerial exam for the time being. If any policies need to be changed they need to be done next time the Board meets.
- Granger asked if drone pilots could legally make pesticide applications under the current rules if they passed the aerial exam. Randlett responded that there is nothing in rule that prohibits it.
- Morrill asked if this topic could be brought back at the next Board meeting as an agenda item, and that the Board would like to look at Chapter 51. He told staff he would like a flow chart about the rule that shows if you want to apply to a specific site what are the rules that govern that.
- Patterson reminded the Board they had previously discussed creating standards that would encompass both aerial and ground drones. There was further discussion about creating one standard encompassing both ground and air drones, and how to create rules around this emerging technology.
- Dave Struble, Maine Forest Service, said the Board needs to get this on the fast track because browntail moth is moving into new areas and people will be looking for solutions, legal or otherwise.
- Morrill agreed that the Board needs to have a discussion and get this in place. Bohlen stated there is not time to do rulemaking and have it be in place for this browntail moth season.
- Morrill added that informational fact finding still needs to be done, including what there is in the current rule, what other states are including in their rule, and exactly how the applications are conducted.